

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. Cancel
2. Cancel
3. Cancel
4. Cancel
5. (Currently amended) A video apparatus according to claim [[4]] 6, wherein said audio/video processing section embeds reproduction managing information in the decoded audio/video signals, and outputs audio/video signals having embedded reproduction managing information as the processed audio/video signals.
6. (Currently amended) A video apparatus for receiving compression encoded digital audio/video signals as audio/video input signals, processing the audio/video input signals and outputting audio/video output signals, comprising:
 - a re-encoder for re-encoding the audio/video input signals and outputting re-encoded audio/video signals, said re-encoder having internal functions for performing decoding and encoding;
 - a recorder for accumulating the re-encoded audio/video signals as accumulated audio/video signals; and
 - a decoder for reading the accumulated audio/video signals as readout audio/video signals and decoding the readout audio/video signals and outputting processed audio/video signals as audio/video output signals;wherein said re-encoder is comprised by:
 - a decoding section for decoding audio/video input signals and outputting decoded audio/video signals;
 - an effect information generating section for generating effect information in response to vacancy information representing a vacancy capacity in the recorder;

an audio/video processing section for applying a process based on the effect information to the decoded audio/video signals, and outputting processed audio/video signals; and

an encoder for compression encoding the processed audio/video signals, and outputting compression encoded audio/video signals as the re-encoded audio/video signals.

7. (Original) A video apparatus according to claim 6, wherein said effect information generating section outputs an instruction to exclude color difference information as the effect information, when a value of the vacancy capacity represented by vacancy information becomes less than a specific number.

8. (Original) A video apparatus according to claim 6, wherein said effect information generating section outputs an instruction to reduce image resolution to a specific value as the effect information, when a value of the vacancy capacity represented by vacancy capacity information becomes less than a specific number.

9. (Original) A video apparatus according to claim 6, wherein said effect information generating section outputs effect information so that image resolution is controlled dynamically in accordance with vacancy capacity information, when a value of the vacancy capacity represented by vacancy capacity information becomes less than a specific number.

10. (Currently amended) A video apparatus according to claim ~~[[2]]~~ 6, wherein ~~said re-encoder is comprised by:~~
~~a decoding section for processing audio/video input signals and outputting decoded audio/video signals; and an encoder for compression encoding the decoded audio/video signals and outputting compression encoded audio/video signals as re-encoded audio/video signals; wherein~~

said encoder is comprised by: a bit-rate controlling section for generating bit-rate control signals in response to vacancy capacity information presenting a vacancy capacity of

the recorder; and an encoding section for compression encoding said decoder audio/video signals, in accordance with said bit-rate control signals and outputting the compression encoded audio/video signals.

11. (Original) A video apparatus according to claim 10, wherein said bit-rate controlling section outputs signals for controlling time averages values to be allocated for coding, as the bit-rate control signals, to automatically adjust bit-rates for the compression encoded audio/video signals, in accordance with the values of vacancy capacity represented by the vacancy capacity information.

12. (Currently amended) A video apparatus ~~according to claim 10~~, for receiving compression encoded digital audio/video signals as audio/video input signals, processing the audio/video input signals and outputting audio/video output signals, comprising:

a re-encoder for re-encoding the audio/video input signals and outputting re-encoded audio/video signals, said re-encoder having internal functions for performing decoding and encoding;

a recorder for accumulating the re-encoded audio/video signals as accumulated audio/video signals; and

a decoder for reading the accumulated audio/video signals as readout audio/video signals and decoding the readout audio/video signals and outputting processed audio/video signals as audio/video output signals;

wherein said re-encoder is comprised by:

a decoding section for processing audio/video input signals and outputting decoded audio/video signals; and an encoder for compression encoding the decoded audio/video signals and outputting compression encoded audio/video signals as re-encoded audio/video signals; wherein

said encoder is comprised by: a bit-rate controlling section for generating bit-rate control signals in response to vacancy capacity information presenting a vacancy capacity of the recorder; and an encoding section for compression encoding said decoder audio/video

signals, in accordance with said bit-rate control signals and outputting the compression encoded audio/video signals;

wherein said bit-rate controlling section outputs signals for controlling color difference information as the bit-rate control signals in accordance with values of vacancy capacity represented by the vacancy capacity information.

13. (Currently Amended) A video apparatus for receiving compression encoded digital audio/video signals as audio/video input signals, processing the audio/video input signals and outputting audio/video output signals, comprising:

a re-encoder for re-encoding the audio/video input signals and outputting re-encoded audio/video signals, said re-encoder having internal functions for performing decoding and encoding;

a recorder for accumulating the re-encoded audio/video signals as accumulated audio/video signals; and

a decoder for reading the accumulated audio/video signals as readout audio/video signals and decoding the readout audio/video signals and outputting processed audio/video signals as audio/video output signals;

wherein said re-encoder is comprised by:

a decoding section for processing audio/video input signals and outputting decoded audio/video signals; and an encoder for compression encoding the decoded audio/video signals and outputting compression encoded audio/video signals as re-encoded audio/video signals; wherein

said encoder is comprised by: a bit-rate controlling section for generating bit-rate control signals in response to vacancy capacity information presenting a vacancy capacity of the recorder; and an encoding section for compression encoding said decoder audio/video signals, in accordance with said bit-rate control signals and outputting the compression encoded audio/video signals; according to claim 10;

wherein said bit-rate controlling section outputs signals for controlling brightness information as the bit-rate control signals in accordance with value of the vacancy capacity represented by the vacancy capacity information[[,]].

14. (Currently amended) A video apparatus according to claim [[2]] 6, wherein said video apparatus is supplied with a plurality of audio/video input signals, and said re-encoder further is comprised by:

a multiplexer for time-division multiplexing of the plurality of audio/video input signals, and outputting time-division multiplexed audio/video signals[[;]]

~~a decoding section for decoding the time-division multiplexed signals; and outputting decoded audio/video signals;~~

~~an audio/video processing section for applying a specific process to the decoded audio/video signals, and outputting processed audio/video signals; and~~

~~an encoder for compression encoding the processed audio/video signals, and outputting compression encoded audio/video signals as the re-encoded audio/video signals.~~

15. (Currently amended) A video apparatus for receiving compression encoded digital audio/video signals as audio/video input signals, processing the audio/video input signals and outputting audio/video output signals, comprising:

a re-encoder for re-encoding the audio/video input signals and outputting re-encoded audio/video signals, said re-encoder having internal functions for performing decoding and encoding;

a recorder for accumulating the re-encoded audio/video signals as accumulated audio/video signals; and

a decoder for reading the accumulated audio/video signals as readout audio/video signals and decoding the readout audio/video signals and outputting processed audio/video signals as audio/video output signals; according to claim 2,

wherein said video apparatus is supplied with a plurality of audio/video input signals, and said re-encoder is comprised by:

a plurality of decoding sections for decoding the plurality of audio/video input signals individually, and outputting a plurality of decoded audio/video signals;

a multiplexer for time-division multiplexing of the plurality of decoded audio/video signals, and outputting time-division multiplexed audio/video signals;

an audio/video processing section for applying a specific process to the time-division multiplexed audio/video signals, and outputting processed audio/video signals; and

an encoder for compression encoding the processed audio/video signals, and outputting compression encoded audio/video signals as the re-encoded audio/video signals.

16. (Currently Amended) A video apparatus according to claim [[2]] 17, wherein said re-encoder is further comprised by:

~~a decoding section for decoding audio/video input signals, and outputting decoded audio/video signals;~~

~~an image resolution conversion filter for converting a resolution of the video signal portion of the audio/video signals, and outputting converted audio/video signals; and~~

~~an encoder for encoding said decoded audio/video signals and said converted audio/video signals, and outputting encoded audio/video signals as the re-encoded signals.~~

17. (Currently amended) A video apparatus for receiving compression encoded digital audio/video signals as audio/video input signals, processing the audio/video input signals and outputting audio/video output signals, comprising:

a re-encoder for re-encoding the audio/video input signals and outputting re-encoded audio/video signals, said re-encoder having internal functions for performing decoding and encoding;

a recorder for accumulating the re-encoded audio/video signals as accumulated audio/video signals; and

a decoder for reading the accumulated audio/video signals as readout audio/video signals and decoding the readout audio/video signals and outputting processed audio/video signals as audio/video output signals; according to claim 2,

wherein said re-encoder is comprised by:

a decoding section for decoding audio/video input signals, and outputting decoded audio/video signals;

a deleter for deleting a portion of the decoded audio/video signals, and outputting deleted audio/video signals; and

an encoder for separately encoding said decoded audio/video signals and said deleted audio/video signals, and outputting two independent groups of encoded audio/video signals as the re-encoded signals.

18. (Original) A video apparatus according to claim 17, wherein said deleter deletes video frames in the decoded audio/video signals at a given frame interval.

19. (Currently amended) A video apparatus for receiving compression encoded digital audio/video signals as audio/video input signals, processing the audio/video input signals and outputting audio/video output signals, comprising:

a re-encoder for re-encoding the audio/video input signals and outputting re-encoded audio/video signals said re-encoder having internal functions for performing decoding and encoding;

a recorder for accumulating the re-encoded audio/video signals as accumulated audio/video signals; and

a decoder for reading the accumulated audio/video signals as readout audio/video signals and decoding the readout audio/video signals and outputting processed audio/video signals as audio/video output signals; according to claim 2,

wherein said re-encoder is comprised by:

a decoding section for decoding audio/video input signals, and outputting decoded audio/video signals;

an audio/video information memory for temporarily storing the decoded audio/video signals, and outputting stored audio/video signals; and

an encoder for compression encoding the stored audio/video signals, and outputting compression encoded audio/video signals as the re-encoded signals; and

means for outputting a specific video frame stored in the audio/video information memory as a still image.

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21. (Currently amended) A video apparatus for receiving compression encoded digital audio/video signals as audio/video input signals, processing the audio/video input signals and outputting audio/video output signals, comprising:

a re-encoder for re-encoding the audio/video input signals and outputting re-encoded audio/video signals, said re-encoder having internal functions for performing decoding and encoding;

a recorder for accumulating the re-encoded audio/video signals as accumulated audio/video signals; and

a decoder for reading the accumulated audio/video signals as readout audio/video signals and decoding the readout audio/video signals and outputting processed audio/video signals as audio/video output signals; according to claim 2,

wherein said video apparatus is further provided with an external decoder for decoding audio/video input signals and outputting externally decoded audio/video signals, and said re-encoder is comprised by:

a decoding section for decoding and processing the audio/video input signals, and outputting internally decoded audio/video signals and coding parameters;

a selector for selecting either said internally decoded audio/video signals or said externally decoded audio/video signals, and outputting selected audio/video signals; and a encoder for encoding the selected audio/video signals according to the coding parameters, and outputting encoded audio/video signals as the re-encoded audio/video signals.

22. (Currently amended) A video apparatus for receiving compression encoded digital audio/video signals as audio/video input signals, processing the audio/video input signals and outputting audio/video output signals, comprising:

a re-encoder for re-encoding the audio/video input signals and outputting re-encoded audio/video signals said re-encoder having internal functions for performing decoding and encoding;

a recorder for accumulating the re-encoded audio/video signals as accumulated audio/video signals; and

a decoder for reading the accumulated audio/video signals as readout audio/video signals and decoding the readout audio/video signals and outputting processed audio/video signals as audio/video output signals; according to claim 2,

wherein said video apparatus is supplied with first audio/video input signals and second audio/video input signals, and said re-encoder is comprised by:

a decoding section for decoding and processing the first audio/video signals, and outputting decoded audio/video signals and coding parameters of the decoded audio/video signals;

a selector for selecting either said decoded audio/video signals or said second audio/video input signals, and outputting selected audio/video signals;

an image resolution conversion filter for converting a resolution of the selected audio/video signals, and outputting converted coding parameters;

a coding parameter converter for converting the coding parameter to match a conversion factor of the image resolution conversion filter, and outputting converted coding parameters; and

an encoder for encoding the converted audio/video signals according to the converted coding parameters, and outputting encoded audio/video signals as the re-encoded audio/video signals.

23. Cancel

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27. (Currently Amended) A re-encoder ~~video apparatus~~ according to claim ~~[[2]]~~28, wherein said audio/video processing section embeds reproduction managing information in the decoded audio/video signals, and outputs audio/video signals having embedded reproduction managing information as the processed audio/video signals.

28. (Currently amended) A re-encoder for receiving compression encoded digital audio/video signals as audio/video input signals for use in a video apparatus for processing the audio/video input signals, wherein said re-encoder re-encodes the audio/video input signals and outputs re-encoded audio/video signals, and said re-encoder is provided with an internal functions for decoding and encoding, A video apparatus according to claim 24, wherein said re-encoder is comprised by comprising:

a decoding section for decoding audio/video input signals and outputting decoded audio/video signals;

an effect information generating section for generating effect information in response to vacancy capacity information representing a vacant capacity in the recorder;

an audio/video processing section for applying a specific process to the decoded audio/video signals according to the effect information, and outputting processed audio/video signals; and

an encoder for compression encoding said processed audio/video signals, and outputting compression encoded audio/video signals as the re-encoded audio/video signals.

29. (Currently Amended) A video apparatus according to claim ~~[[2]]~~ 28, wherein said effect information generating section outputs an instruction to exclude color difference information as the effect information, when a value of the vacancy capacity represented by vacancy capacity information becomes less than a specific number.

30. (Original) A video apparatus according to claim 28, wherein said effect information generating section outputs an instruction to reduce image resolution to a specific value as the effect information, when a value of the vacancy capacity represented by vacancy capacity information becomes less than a specific number.

31. (Original) A video apparatus according to claim 28, wherein said effect information generating section outputs effect information as that image resolution is controlled dynamically in accordance with vacancy capacity information, when a value of the vacancy capacity represented by vacancy capacity information becomes less than a specific number.

32. (Currently amended) A re-encoder according to claim ~~[[24]]~~ 28, wherein ~~said re-encoder is comprised by: a decoding section for processing audio/video input signals and outputting decoded audio/video signals; and an encoder for compression encoding the decoded audio/video signals and outputting compression encoded audio/video signals as re-encoded audio/video signals; wherein said encoder is comprised by:~~ a bit-rate controlling section for generating bit-rate control signals in response to vacancy capacity information representing a vacancy capacity of the recorder; and an encoding section for compression encoding said decoded audio/video signals, in accordance with said bit-rate control signals and outputting said compression encoded audio/video signals.

33. (Original) A re-encoder according to claim 32, wherein said bit-rate controlling section outputs signals for controlling time averaged values to be allocated for coding, as the bit-rate control signals, to automatically adjust bit-rates for the compression encoded audio/video signals, in accordance with values of vacancy capacity represented by the vacancy capacity information.

34. (Currently amended) A re-encoder for receiving compression encoded digital audio/video signals as audio/video input signals for use in a video apparatus for processing the audio/video input signals, wherein said re-encoder re-encodes the audio/video input

signals and outputs re-encoded audio/video signals, and said re-encoder is provided with an internal functions for decoding and encoding, said re-encoder comprising:

a decoding section for processing audio/video input signals and outputting decoded audio/video signals; and

an encoder for compression encoding the decoded audio/video signals and outputting compression encoded audio/video signals as re-encoded audio/video signals;

wherein said encoder is comprised by: a bit-rate controlling section for generating bit-rate control signals in response to vacancy capacity information representing a vacancy capacity of the recorder; and an encoding section for compression encoding said decoded audio/video signals, in accordance with said bit-rate control signals and outputting said compression encoded audio/video signals;

~~A re-encoder according to claim 32~~, wherein said bit-rate controlling section outputs signals for controlling color difference information as the bit-rate control signals in accordance with value of vacancy capacity.

35. (Currently amended) A re-encoder for receiving compression encoded digital audio/video signals as audio/video input signals for use in a video apparatus for processing the audio/video input signals, wherein said re-encoder re-encodes the audio/video input signals and outputs re-encoded audio/video signals, and said re-encoder is provided with an internal functions for decoding and encoding, said re-encoder comprising:

a decoding section for processing audio/video input signals and outputting decoded audio/video signals; and

an encoder for compression encoding the decoded audio/video signals and outputting compression encoded audio/video signals as re-encoded audio/video signals;

wherein said encoder is comprised by: a bit-rate controlling section for generating bit-rate control signals in response to vacancy capacity information representing a vacancy capacity of the recorder; and an encoding section for compression encoding said decoded audio/video signals, in accordance with said bit-rate control signals and outputting said compression encoded audio/video signals;

~~A re-encoder according to claim 32~~, wherein said bit-rate controlling section outputs signals for controlling brightness information as the bit-rate control signals in accordance with value of vacancy capacity.

36. Cancel

37. (Currently amended) A re-encoder for receiving compression encoded digital audio/video signals as audio/video input signals for use in a video apparatus for processing the audio/video input signals, wherein said re-encoder re-encodes the audio/video input signals and outputs re-encoded audio/video signals, and said re-encoder is provided with an internal functions for decoding and encoding, said re-encoder comprising:

a decoding section for processing audio/video input signals and outputting decoded audio/video signals; and

an encoder for compression encoding the decoded audio/video signals and outputting compression encoded audio/video signals as re-encoded audio/video signals;

~~A re-encoder according to claim 24~~, wherein said video apparatus is supplied with a plurality of audio/video input signals, ~~and said re-encoder being is~~ comprised by:

a plurality of decoding sections for decoding the plurality of audio/video input signals individually, and outputting a plurality of decoded audio/video signals;

a multiplexer for time-division multiplexing of the plurality of decoded audio/video signals, and outputting time-division multiplexed audio/video signals;

an encoder for compression encoding the processed audio/video signals, and outputting compression encoded audio/video signals as the re-encoded audio/video signals.

38. (Currently amended) A re-encoder according to claim ~~[[24]]~~ 39, wherein said re-encoder is further comprised by:

~~a decoding section for decoding audio/video input signals, and outputting decoded audio/video signals;~~

an image resolution conversion filter for converting a resolution of the video signal portion of the audio/video signals, and outputting converted audio/video signals; ~~and~~

~~an encoder for encoding said decoded audio/video signals and said converted audio/video signals, and outputting encoded audio/video signals as the re-encoded signals.~~

39. (Currently Amended) A re-encoder for receiving compression encoded digital audio/video signals as audio/video input signals for use in a video apparatus for processing the audio/video input signals, wherein said re-encoder re-encodes the audio/video input signals and outputs re-encoded audio/video signals, and said re-encoder is provided with an internal functions for decoding and encoding ~~A video apparatus according to claim [[2]] 24, wherein said re-encoder is comprised by~~ comprising:

a decoding section for decoding audio/video input signals, and outputting decoded audio/video signals;

a deleter for deleting a portion of the decoded audio/video signals, and outputting deleted audio/video signals; and

an encoder for separately encoding said decoded audio/video signals and said deleted audio/video signals; and

an encoder for separately encoding said decoded audio/video signals and said deleted audio/video signals, and outputting two independent groups of encoded audio/video signals as the re-encoded signals.

40. (Original) An ere-encoder according to claim 39, wherein said deleter deletes video frames in the decoded audio/video signals at a given frame interval.

41. (Currently amended) ~~A re-encoder according to claim 24, wherein said re-encoder is comprised by~~ A re-encoder for receiving compression encoded digital audio/video signals as audio/video input signals for use in a video apparatus for processing the audio/video input signals, wherein said re-encoder re-encodes the audio/video input signals and outputs re-encoded audio/video signals, and said re-encoder is provided with an internal functions for decoding and encoding comprising:

a decoding section for decoding audio/video input signals, and outputting decoded audio/video signals;

an audio/video information memory for temporarily storing the decoded audio/video signals, and outputting stored audio/video signals; and

an encoder for compression encoding the stored audio/video signals, and outputting compression encoded audio/video signals as the re-encoded signals; and

means for outputting a specific video frame stores in the audio/video information memory as a still image.

42. Cancel

43. (Currently amended) A re-encoder according to claim 24, for receiving compression encoded digital audio/video signals as audio/video input signals for use in a video apparatus for processing the audio/video input signals, wherein said re-encoder re-encodes the audio/video input signals and outputs re-encoded audio/video signals, and said re-encoder is provided with an internal functions for decoding and encoding, comprising:

wherein said video apparatus is supplied with first audio/video input signals and second audio/video input signals, and said re-encoder is comprised by:

a decoding section for decoding and processing the first audio/video signals, and outputting decoded audio/video signals and coding parameters of the decoded audio/video signals;

a selector for selecting either said decoded audio/video signals or said second audio/video input signals, and outputting selected audio/video signals;

an image resolution conversion filter for converting a resolution of the selected audio/video signals, and outputting converted coding parameters;

a coding parameter converter for converting the coding parameter to match a conversion factor of the image resolution conversion filter, and outputting converted coding parameters; and

an encoder for encoding the converted audio/video signals according to the converted coding parameters, and outputting encoded audio/video signals as the re-encoded audio/video signals.